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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,389	12/23/2003	Masahiko Matsukawa	21581-00310-US	7940
30678	7590	02/27/2006	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ LLP			KRUER, KEVIN R	
SUITE 800			ART UNIT	
1990 M STREET NW			PAPER NUMBER	
WASHINGTON, DC 20036-3425			1773	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/743,389	<b>Applicant(s)</b> MATSUKAWA ET AL.	
	<b>Examiner</b> Kevin R. Kruer	<b>Art Unit</b> 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,7-11,13-15,17,18 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,7-11,13-15,17,18 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. The rejections of claims 12 and 16-20 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been overcome by amendment

Claims 12, 16, 19, and 20 have been canceled.

The dependencies of claims 17 and 20 have been amended to overcome the rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2, 14, and 17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hauser US 6,312,812).

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Hauser teaches a metal substrate coated with a pretreatment composition (abstract). The metal substrate may be iron, aluminum, zinc, steel and alloys thereof (col 3, lines 59+). The surface of the metal is degreased (col 4, lines 9+), rinsed with water, and then contacted with the pretreatment composition. The pretreatment is applied in amounts of 0.1-1000mg/m and may be applied as two compositions or as a single composition (col 12, lines 60+). The pretreatment composition comprises the following components:

A transition metal element (col 4, lines 42+) chosen from the group consisting of zirconium, titanium, and hafnium (col 4, lines 53+) in amounts of 10-2000ppm (col 5, line 23+);

A fluorine-containing material as a source of fluorine ions (col 11, lines 63+);  
blocked or unblocked polyisocyanates, and/or aminoplasts as crosslinking agents (col 6, lines 1+);

Citric acid in amounts sufficient to adjust the pH of the treating solution to about 2 to 9 (col 11, lines 52+);

Calcium or zinc ions (col 6, lines 20+);

0.05-10wt% of a reaction product of one or more epoxy functional material and an amine-containing materials (col 7, lines 15+). The epoxy is soluble in water diluents to the extent of at least about 0.03g/grams of water (col 11, lines 25+);

And silica (col 14, line 47+).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 7-11, 13-15, 17, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan (US 5,449,415) in view of McMillen et al (US 5,653,823).

Dolan teaches a chromium free conversion coating for a metal substrate (abstract). The metal substrate may be iron, aluminum, zinc, steel and alloys thereof (col 1, lines 13+). The surface of the metal is degreased rinsed with water, and then contacted with the pretreatment composition (col 9, lines 48+). The pretreatment is applied solution is applied in amounts of 5-500mg/m<sup>2</sup> (claim 17). The pretreatment composition comprises the following components:

- A transition metal element (abstract) chosen from the group consisting of zirconium, titanium, and hafnium (abstract) in amounts of 0.15-1.0M/kg (col 5, lines 33+);
- A fluorine-containing materials as a source of fluorine ions (abstract-component (i))
- 1-10wt% of a water soluble or water-dispersible organic polymer (component E-abstract) such as an epoxy or aminoplast (col 5, lines 66+);
- Acid in amounts sufficient to adjust the pH of the treating solution to about 0.5-5 (abstract);

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- Cobalt, magnesium, nickel, tin, iron, copper, zinc ions (col 6, lines 20+);
- And silica (table 2).

Dolan does not teach the organic resin may comprise an epoxy compound containing an isocyanate group and/or melamine group. However, McMillan teaches a chromium-free rinse composition. McMillan teaches the resin should comprise an IVB metal ion and an epoxy polymeric compound (col 2, lines 10+). The epoxy adheres better to the metal substrate and does not wash away as easy (col 2, lines 23+). Said resin may comprise an epoxidized aminoplast wherein the aminoplast may comprise melamine or urea-formaldehyde (col 3, lines 49+). Said resin is water-dispersible (col 5, lines 28+) and is herein understood to read on the claimed "water soluble epoxy compound" and the claimed "melamine resin." Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the epoxidized melamine taught in McMillan as the organic resin taught in Dolan. The motivation for doing so would have been that said resin exhibits improved adhesion to the metal substrates and improved performance

***Allowable Subject Matter***

7. In the office action of 8/2005, claims 1-3, 7-11, 13-15 and 21 were indicated as allowable. However, new art was found when updating the search. The office apologizes for any inconvenience the error may have caused.

The examiner further notes that Hauser has been reapplied to claims 2 and claims that depend therefrom because applicant's arguments with respect to patentability did not agree in scope with said claims. Specifically, the epoxy resin

claimed in claim 2 is not a water-soluble epoxy containing an isocyanate and/or melamine group.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773